

**In the Specification:**

Please replace the Abstract with the following new Abstract:

--Methods and apparatus ~~are disclosed~~ to manage a cache memory. An example method of managing a cache comprises identifying program states associated with an executing program; comparing a time of first discovery of a program state to a most recent time of first discovery to determine if the program state is associated with short-lived objects; and if the program state is associated with short-lived objects and program execution is transitioning to a program state associated with long-lived objects, flushing the cache of data associated with the program state.

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Please replace paragraph [0029] with the following paragraph:

—[0029] In the example of FIG. 4 a random hashing function 30 is used to map the entries in a set 26 to an n-bit vector 28. In the example of FIG.4, the value “B” 32 defines the resolution of the model (e.g., the number of entries in the set 26 that are skipped (if any) and/or processed by the hash function 30 to generate the n-bit vector 28). The basic use of a hash function 30 to map a set of entries from a trace 18 into a bit vector is well known to persons of ordinary skill in the art (see, for example, Dhodapkar & Smith, “Managing Multi-Configuration Hardware Via Dynamic Working Set Analysis,” <http://www.cae.wisc.edu/~dhodapka/isca02.pdf>) and thus, in the interest of brevity, will not be further explained here. The interested reader can refer to any number of sources, including, for example, the Dhodapkar & Smith article mentioned above, for further information on this topic.—.